

REMARKS

Claims 1, 3-17, 19-21 and 26 are now pending in the application. Claims 1, 3-17, 19-21 and 26 stand rejected. Claims 2 and 18 were previously cancelled. Claims 22-25 have been cancelled herein and Claims 1 and 13 have been amended. Support for the amendments can be found throughout the application, drawings and claims as originally filed and, as such, no new matter has been presented. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. §§ 102 AND 103

Claims 1 and 3-5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by, or alternatively under 35 U.S.C. § 103(a) as being obvious over Raevsky (U.S. Pat. No. 5,206,088; hereinafter "Raevsky"). Claims 6-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raevsky for reasons of record set forth in paragraph 8 of the Office Action mailed on July 20, 2007. These rejections are respectfully traversed.

Initially, Applicants note that Raevsky appears to disclose a method of increasing fire retardant properties. In one example, Raevsky teaches that applying an ablative material to a sheetrock, and coating the sheetrock with an intumescent paint increases flame retardant properties. Raevsky teaches that the ablative material, SM-F, is formed by roll milling the associated constituents to form a mixture, which is then compression molded into sheets. Then, Raevsky discloses that the intumescent paint is applied in two coats. In another example, Raevsky teaches the use of SM-P as an ablative

material, which is formed by compression molding a paste of the SM-P into a plaster. In sum, Raevsky teaches applying a coating to a formed layer of ablative material, in which the formed layer of ablative material is formed through compression molding. In contrast to Raevsky, independent Claim 1 has been amended to recite:

...a **sprayable ablative material** adapted to be sprayed onto a surface;
an intumescent material **intermixed** with at least a portion of the sprayable ablative material to form a **sprayable ablative composition**; and
wherein the sprayable ablative composition is adapted to form a thermal protection layer for the surface;
wherein the intumescent material is intermixed with only a portion of the thickness of the sprayable ablative material... (emphasis added).

In view of the above discussion, Applicants respectfully assert that Raevsky does not teach, suggest or disclose each and every element of independent Claim 1. In this regard, Raevsky does not teach, suggest or disclose a **sprayable ablative material** adapted to be sprayed onto a surface, an intumescent material intermixed with at least a portion of the sprayable ablative material to form a **sprayable ablative composition**, in which the intumescent material is intermixed with only a portion of the thickness of the sprayable ablative material, as claimed. Rather, Raevsky teaches, as noted by the Office, an ablative sheet that is formed by roll milling and compression molding, which can then be adhered to a substrate. Thus, Raevsky does not teach, suggest or disclose a sprayable ablative material. In addition, Applicants also note that one of ordinary skill in the art would not modify Raevsky to include a sprayable ablative composition as there is no evidence or suggestion of such a configuration in the cited art. (see *Ex Parte Katoh et. al.*, Appeal 20071460, Decided May 29, 2007).

Further, as Raevsky does not teach, suggest or disclose a sprayable ablative material, Raevsky further fails to teach, suggest or disclose an intumescent material intermixed with at least a portion of the sprayable ablative material to form a sprayable ablative composition. At best, Raevsky teaches spraying only an intumescent paint onto the formed sheet of ablative material, and does not teach, suggest or disclose spraying an ablative composition onto a surface, or that an intumescent material is intermixed with a sprayable ablative material to form the sprayable ablative composition.

In addition, Applicants note that the intumescent material of Raevsky cannot be intermixed with the SM-F of Raevsky. The Office states that the SM-F of Raevsky "will stay particulate after roll milling at 70°C and compression molding into sheets so that it would be porous due to the presence of the particles." Applicants note, however, that one of ordinary skill in the art of polymers would understand that the presence of the particles would render the sheets of SM-F **non-porous**. For example, concrete, which is a mixture of particles (gravel and sand) and a binder (cement and water), is not porous as the particles (gravel and sand) fill any voids in the binder (cement and water). Paint sprayed onto concrete coats only the exterior layer of the concrete, and does not penetrate into the concrete. Similar to concrete, the SM-F of Raevsky is a mixture of particles (aluminum sulfate hydrate) and a binder (polymers). The particles (aluminum sulfate hydrate) fill the voids in the binder (polymers), rendering the SM-F of Raevsky also non-porous. Thus, like concrete, the spraying of the intumescent paint onto the SM-F coats only the exterior layer of the SM-F, and does not penetrate into the SM-F.

Accordingly, for at least these reasons, Applicants respectfully assert that Raevsky does not teach, suggest or disclose each and every element of independent

Claim 1, and as such, Applicants respectfully request the reconsideration and withdrawal of the rejection of Claim 1 under 35 U.S.C. §§ 102(b) and 103(a).

With regard to Claims 3-12, Applicants note these claims depend directly or indirectly from independent Claim 1, and thus, should be in condition for allowance for the reasons set forth for Claim 1 above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 3-12 under 35 U.S.C. §§ 102(b) and 103(a).

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Raevsky in view of Deogan et al. (U.S. Pat. No. 5,900,281; hereinafter "Deogan"). Claim 19 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Raevsky in view of Tzur, further in view of Deogan. These rejections are respectfully traversed.

With regard to Claims 10 and 19, Applicants note these claims depend directly or indirectly from independent Claim 1 or 13, and thus, should be in condition for allowance for the reasons set forth for Claims 1 and 13 above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 10 and 19 under 35 U.S.C. § 103(a).

Claims 11-17, 19-21, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raevsky in view of Tzur (U.S. Pat. No. 4,632,865; hereinafter "Tzur"). This rejection is respectfully traversed.

Applicants respectfully refer the Office to the remarks regarding Claims 1 and 3-12 for a discussion of the Raevsky reference. With regard to Tzur, Tzur appears to

disclose a multi-layer fire retardant composition, which includes a hardener mixed completely to form the discrete layers. In contrast to Raevsky and Tzur, singly or in combination, independent Claim 13 has been amended to recite:

...a first quantity of a **sprayable ablative material** operable to be applied to a surface to form a first sprayed-on ablative layer;

an intumescent material **intermixed with** a second quantity of said **sprayable ablative material** and operable to be applied as a second sprayed-on ablative layer on said first sprayed-on ablative layer; and

wherein said first and second sprayed-on ablative layers cooperatively form said ablative composition (emphasis added).

In view of the above discussion, Applicants respectfully submit that Raevsky and Tzur, singly or in combination, do not teach, suggest or disclose each and every element of independent Claim 13. In this regard, as discussed with regard to Claim 1, Raevsky does not teach, suggest or disclose **a sprayable ablative material**, and thus, Raevsky does not teach, suggest or disclose a sprayable ablative material that is operable to be applied to a surface to form a first sprayed-on ablative layer, or an intumescent material **intermixed with** a second quantity of the **sprayable ablative material** and operable to be applied as a second sprayed-on ablative layer on the first sprayed-on ablative layer, as claimed. Tzur does not remedy these shortcomings of Raevsky, as Tzur teaches the formation of multiple layers of fire retardant sheets, and does not teach, suggest or disclose a sprayable ablative material. In addition, as noted by the Office, Tzur also does not teach, suggest or disclose an intumescent material intermixed with a second quantity of the sprayable ablative material and operable to be applied as a second sprayed-on ablative layer on the first sprayed-on ablative layer.

Accordingly, for at least these reasons, Applicants respectfully assert that Raevsky and Tzur, singly or in combination, do not teach, suggest or disclose each and every element of Claim 13, and as such, Applicants respectfully request the reconsideration and withdrawal of the rejection of Claim 13 under 35 U.S.C. § 103(a).

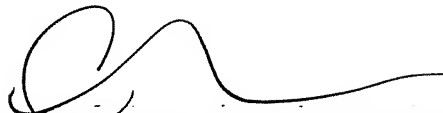
With regard to Claims 11, 12, 14-17, 19-21, and 26, Applicants note these claims depend directly or indirectly from independent Claim 1 or 13, and thus, should be in condition for allowance for the reasons set forth for Claims 1 and 13 above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 11, 12, 14-17, 19-21, and 26 under 35 U.S.C. § 103(a).

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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